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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 0230-0219PUS1																			
	Application Number 10/520,349-Conf. #5681	Filed September 12, 2005																			
	First Named Inventor Atsushi NAGASAWA																				
	Art Unit 1794	Examiner H. R. Badr																			
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table><tbody><tr><td><input type="checkbox"/></td><td>applicant /inventor.</td><td></td><td>Signature</td></tr><tr><td><input type="checkbox"/></td><td>assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/95)</td><td>Mark J. Nuell, Ph.D.</td><td>Typed or printed name</td></tr><tr><td><input checked="" type="checkbox"/></td><td>attorney or agent of record. Registration number 36,623</td><td>(858) 792-8855</td><td>Telephone number</td></tr><tr><td><input type="checkbox"/></td><td>attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34.</td><td>September 2, 2010</td><td>Date</td></tr></tbody></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.</p> <table><tbody><tr><td><input type="checkbox"/></td><td>*Total of 1 forms are submitted.</td></tr></tbody></table>				<input type="checkbox"/>	applicant /inventor.		Signature	<input type="checkbox"/>	assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/95)	Mark J. Nuell, Ph.D.	Typed or printed name	<input checked="" type="checkbox"/>	attorney or agent of record. Registration number 36,623	(858) 792-8855	Telephone number	<input type="checkbox"/>	attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34.	September 2, 2010	Date	<input type="checkbox"/>	*Total of 1 forms are submitted.
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Patent Application of:  
Atsushi NAGASAWA

Application No. 10/520,349

Confirmation No. 5681

Filed: September 12, 2005

Art Unit: 1794

For: NOVEL BAKERS' YEAST STRAINS AND  
BREAD MADE USING THE SAME

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Examiner: H. R. Badr

**REQUEST FOR PRE-APPEAL BRIEF CONFERENCE**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The period for response being extended to September 2, 2010 by petition filed herewith, the following remarks are provided as a Request for Pre-Appeal Conference in response to the Final Office Action dated March 2, 2010.

The Final Office Action of March 2, 2010 presents the examination of claims 20, 23 and 24. These claims remain pending and have not been further amended from their form as amended June 17, 2009.

Claims 20, 23 and 24 are rejected under 35 USC § 103(a) as being unpatentable over Nakagawa (1994). This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested. Applicant again insists that the Examiner has failed to establish *prima facie* obviousness of the claimed invention. Applicant submits that the Examiner maintains the present rejection based on plain errors of fact and law.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20

mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l Co. v. Teleflex Inc.*

With respect to the requirement that the prior art must teach or suggest all of the recited claim limitations, Applicant notes that the Examiner has admitted that Nakagawa (1994) is silent with respect to the disclosure of the strain FT-4. So, the Examiner's assertion of *prima facie* obviousness fails at the outset.

The Examiner appears to be relying upon a theory of inherency to maintain an obviousness rejection. Although not expressly stated as such, the Examiner reasons that the yeast strain disclosed in Nakagawa (1994) is obtained by a process of hybridization of *S. cerevisiae* haploids and that the resulting strain is one that can ferment lean, regular and sweet doughs, and therefore the presently claimed strain is merely an obvious variant of the strain disclosed in Nakagawa (1994).

Applicant notes that the present claims are not product-by-process claims. However, the claimed strain FT-4 was obtained by a process much different than by which Nakagawa's strains were obtained. Specifically, FT-4 was constructed as follows (*see*, Example 1 beginning at page 11 of the specification):

1) Spores of a diploid yeast strain (the Applicant's YF yeast) belonging to *Saccharomyces cerevisiae*, and which are at least highly freeze-tolerant, were germinated to obtain a haploid yeast strain.

2) Likewise, spores of a diploid yeast strain (the Applicant's sake yeast) belonging to *Saccharomyces cerevisiae*, which was not freeze-tolerant, but which has only negligible offensive taste and odor characteristic of yeast, were germinated to obtain another haploid yeast strain.

3) These haploid yeast strains were crossed to give a large number of diploid yeast strains, which were screened for freeze tolerance.

4) The resulting freeze-tolerant strains were screened for an offensive taste and odor characteristic.

5) Finally, isobutyric acid contents of cultures of the yeasts were compared, and the strain FT-4 having a good freeze-tolerance, no offensive taste or odor and low isobutyric acid production characteristics was selected.

On the other hand, the Nakagawa's yeast was constructed as follows (*see*, Materials and Methods):

a) Spores of diploid yeast strain (Strain TYR, a freeze-tolerant baker's yeast from the collection of Kyowa Hakko Kogyo Co., Ltd.) belonging to *Saccharomyces cerevisiae* were cultured as haploid cells.

b) High maltose-fermentative haploid yeast strains were selected.

c) Mating type (a or  $\alpha$ ) was determined.

d) Haploid strains having good dough-raising properties and activity for raising a frozen dough raising activity were selected from among clones of b).

e) Hybrids were constructed by mating the haploid strains d) to obtain advantageous diploid yeast strains having good activity of high maltose fermentation and good frozen dough raising activity (*see*, "Construction of hybrids and their dough-raising ability").

Thus, FT-4 and the Nakagawa's strains were derived from different parent strains by selection for entirely different characteristics. Therefore, it is clear that the FT-4 strain is entirely different from the strains disclosed by Nakagawa (1994). The Examiner's reasoning in support of a conclusion of obviousness completely ignores the facts of the present application and so lacks any "rational underpinning".

Furthermore, the Examiner ignores facts in evidence that demonstrate the unobviousness of the present invention. In this regard, there is no reasonable ground on which the Examiner can assert that the strains disclosed in Nakagawa (1994) have a low isobutyric acid content. Applicant submits that, for instance, typical yeasts used in baking produce significant amounts of isobutyric acid (*see e.g.*, page 2, lines 14-20, and also page 8, lines 14-26 of the specification), and in the absence of selection against this characteristic, there is no reason to suppose that a yeast having a low isobutyric acid content would be obtained. Certainly the Examiner does not provide any scientifically reasoned statement why a strain having a low isobutyric acid content would be obtained from the process of Nakagawa (1994) nor does he provide any evidence to support his assertion that the strains of Nakagawa would have this property.

Indeed, there is no reasonable basis upon which to assert that yeast strains having a high freeze tolerance or suitability for use in lean, regular and sweet doughs also have a low content of components responsible for offensive taste and odor. In fact, considering the data of isobutyric acid content data of Table 3 and fermentability of various doughs in Table 6 of the present specification, one cannot identify any correlation between isobutyric acid content and fermentability of different doughs. For example, the fermentability of the various doughs of the yeast of Company C is intermediate between those of Company A and Company B. However, the isobutyric acid content of the yeast of Company C is lower than, or approximately the same as (as there are two yeasts shown for Company A), that of the yeast of both Company A and Company B.

Similarly, data in the present specification show no correlation of freezing tolerance with isobutyric acid content in the yeast. With respect to fermentability of doughs after one month of frozen storage of the dough, on a low-sugar dough  $A < B < C < YF < FT-4$  and on a high-sugar dough  $A < C < B < YF < FT-4$  (Table 8). Data in Table 10 of the specification also show a variable ordering of residual fermentability for different kinds of doughs and different times of frozen storage. Such variation shows that isobutyric acid content is not a variable determinative of freezing tolerance.

The Examiner asserts that Applicant has not provided any data quantitating isobutyric acid in the strains of Nakagawa. However, nothing in the Nakagawa (1994) paper suggests that the strains disclosed are atypical in regard to isobutyric acid content, and the specification, at page 8, lines 24-26 indicates the isobutyric acid content of typical yeast strains used for baking to be in the range of 300 to 1000 ppm, whereas for the strain FT-4 the content is about 125 ppm. Thus, the Examiner is mistaken as to his facts on this point.

Furthermore, Applicant has argued that the low isobutyric acid content of the strain FT-4 confers advantages to the consumer upon both the frozen dough and the final baked products obtained. The Examiner has dismissed these arguments on the basis that isobutyric acid, being a volatile organic acid, would not be present in the final baked product. However, in the same breath the Examiner contradicts himself, citing US 5916609 as establishing that indeed isobutyric acid is a compound having an effect on the flavor and odor of a final baked product. (See, paragraph 1.b. under "Response to Arguments" at pp. 5-6 of the Office Action.)

Applicant maintains that isobutyric acid does exist in final baked products and plays an important role in the taste and aroma of the final baked product. Applicant refers to JP06-52A as supporting evidence, which is of record by the IDS filed January 4, 2005; an English translation of pertinent parts of the reference is attached hereto.

The Examiner states in the Office Action that, "There is no evidence to suggest that use of FT-4 strain in the dough results in improved taste and aroma of the baked product." (Page 6 of the Office Action.) The Examiner is simply wrong on this point. Applicant notes Example 6 (at page 20 of the specification) and Table 10 (at page 23) of the present specification. Applicant assessed not only the odor of yeast but also the flavor of baked products. Applicant insists that use of the FT-4 strain, which contains only a small amount isobutyric acid, in a dough also brings about advantageous effects in the final baked product.

The Examiner is maintaining the present rejections due to gross errors of fact and law. For all of the reasons set forth above, Applicant submits that Nakagawa (1994) fails to establish *prima facie* obviousness of the present invention, and the rejection of claims 20, 23 and 24 as obvious over Nakagawa (1994) should be withdrawn.

The present claims are patentable over the prior art of record. The favorable actions of withdrawal of the standing rejections and allowance of the claims are requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: September 2, 2010

Respectfully submitted,

By:

  
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Attachment: English translation of JP06-52A